

MATH2111 Class Exercise 8

Family Name	Other Names	Student No.

CALCULATORS MUST NOT BE USED

1. Suppose a coin is tossed and a die is cast. What is the set of all possible outcomes of the combined experiment? (Note that the set of outcomes from tossing the coin is $\{H, T\}$ where H stands for “head” and T stands for “tail”, and that the set of outcomes from casting a die is $\{1, 2, 3, 4, 5, 6\}$.)

(2)

2. Suppose one experiment has 48 possible outcomes and another has 50 possible outcomes. How many outcomes are there in the combined experiment?

(2)

3. (a) Evaluate: $8!$

(b) Evaluate: 8P_3 .

(c) Evaluate: 8C_3

(d) Evaluate: 8C_5

(2)

4. A researcher starts randomly selecting integers from the set $\{1, 2, 3, 4, 5\}$. The selections are done without replacement.

(a) List all possible 3-number selections.

(2)

- (b) The researcher will stop when she has selected more odd numbers than even numbers. What is the largest number of selections she will need to make?

(2)
